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THE GENERAL PROBLEM OF PARASITIC INFESTATION IN HORSES*

BY

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This is the second time I have had the privilege of being invited to present a paper to you, the first many years ago when I was very young. I am consequently deeply conscious of the honour, and I would like to thank you for the invitation.

I have chosen a title, in consultation with Mr. T. Mitchell, which requires some explanation in order that neither you nor I shall have any incorrect impressions. First, I do not claim to be a parasitologist. I have always been interested in host-parasite relationships and in the extraordinarily fascinating biological phenomena of parasitism in domesticated animals, and it is inevitable that one acquires a large amount of information if one has an especial interest in a particular subject ; during recent years we have had plenty of opportunity at Newmarket to appreciate the very great significance of parasitic worms in horses and the magnitude of the trouble which may result.

In a recent address I tried to make a provisional grouping of equine worm parasites, in relation to their seriousness in the host. This may not appeal to the systematist nor to the expert parasitologist, and it is of course subject to variations which may change the grouping in a particular animal, or in the same animal at different times. I think, however, that it is useful to enable a balanced view to be obtained regarding first, the potential seriousness of a case, and, secondly, the best means of attempting control. The grouping is as follows :—

GROUP I.—NORMALLY OF LOW CLINICAL SIGNIFICANCE

Oxyurids
Anoplocephalae
Trichonema sp.
Strongyloides westeri } when in ordinary small numbers
Trichostrongylus axei.

GROUP II.—CLINICALLY SIGNIFICANT, BUT NOT USUALLY LETHAL

All the small strongyles when present in considerable or large numbers, *viz.* :—
Trichonema sp.
Gyalocephalus
Poteriostomum
Oesophagostomum
and *Triodontophorus*
Ascaris equorum
The migrating larvae of all species of strongyles and of ascaris
Also, included for convenience, larvae of *Gastrophilus* sp.

GROUP III.—CLINICALLY DANGEROUS

Strongylus edentatus
Strongylus equinus
Strongylus vulgaris.

This arrangement is useful in reaching an interpretation of the results of worm egg counts and larval cultures, and in the application of this knowledge to treatment and control. It can easily be criticised, but it is definitely useful in practice.

MEANS OF DIAGNOSIS

At the Equine Station we carry out a large number of egg counts and differential larval percentage counts, using standard techniques slightly modified to suit our own particular requirements. I think it is generally agreed that no one should place any undue mathematical significance upon the mere egg-count figures obtained on examination of a single sample of faeces, nor upon the differential larval counts. However, we are convinced that from such counts from all the horses on a stud, and in particular when a series of counts are made, very valuable information is acquired regarding the general worm status of the stud, and when repeated at regular intervals, of the general trend of parasitism, whether improving or deteriorating. Morgan & Parnell (1950, 1951) have drawn attention to the natural seasonal fluctuations in egg counts in sheep, and we also find that through the year there are peaks and troughs in horses which are not under any special worm control regime. The heaviest output of worm eggs is in the spring and early summer, and the lowest during December and January. This means that in interpreting egg-count figures, some attention must be paid to the time of sampling. A count of 1,500 e.p.g. in a two-year-old at New Year is potentially more serious than the same figures obtained in June.

The egg count technique enables the eggs to be separated into three or four main groups ; *viz.*, ascarids, strongyles, tapeworms and oxyurids, and by count, the proportions of these give perhaps some small indication of the members of species present. They do not, however, represent the numbers of worms in each species in arithmetic proportions, since female worms lay eggs at markedly different rates per day, varying from somewhere about 10 or 12 eggs per female per day for the smaller strongyle species up to, it is claimed, many thousands per day for female ascarids.

The strongyle worm eggs cannot be specifically identified during the count technique ; for them the differential larval percentage count method is used for identification.

The differential larval percentage figure does not represent the percentage differentiation with high mathematical accuracy. The method is to hatch out the hatchable strongyle eggs in a sample of faeces, into larvae ; separate them from faeces and debris ; collect a given quantity ; kill them, and in a count of an agreed number, separate the larvae into 8 or 10 principal species, by microscopic examination. The results are expressed as percentages of the species identified.

A convenient differentiation is into the following : *Trichonema* spp. ; *Gyalocephalus* spp. ; *Poteriostomum* sp. ; *Oesophagostomum* spp. ; *Triodontophorus* spp. ; *Strongyloides westeri* ; *Strongylus equinus* ; *Strongylus edentatus* ; *Strongylus vulgaris* ; *Trichostrongylus axei* ; and perhaps one or two more.

* Presented to the North of England Division, B.V.A., at Durham, December 12th, 1952.

It will thus be seen that in the horse a very rough indication can be obtained of the number of the species present in a horse if worm egg counts and differential larval percentage figures are both available to the clinician. Treatment can be adapted to each horse's needs in consequence.

Interpretation of Results

This is not always easy. Horses vary much in their reactions to parasite infestations, with age, breed, condition, time of year and method of management.

Young foals of all breeds are most susceptible, and as age increases so resistance develops, and the significance of parasitism becomes less to the individual. Among breeds, the smaller hardier pony breeds are more resistant than larger horses, and probably the thoroughbred is the most susceptible, most particularly when not well fed. The heavy draught breeds are not markedly resistant, but tolerate large numbers of ascarids with apparent impunity.

All young horses when in poor condition through bad feeding, and especially when under restricted or concentrated grazing conditions, are of course much more susceptible to infestation than when the reverse of these conditions obtains. This is a fundamental truth which applies to all farm livestock. Probably no horses are better or more extravagantly fed than thoroughbreds under normal conditions, yet parasitic worms are one of the greatest single causes of trouble, if not the greatest, up to about three years of age. This apparently contradictory statement is, we think, largely explained by the system which obtains on so many stud farms of having too many horses on too few acres. It is notable that on the studs where the available acreage is generous, and especially where a system of normal farming is practised, with the grassland being ploughed and cropped and reseeded in regular rotation, the general problem of parasitism is least acute.

All these varying conditions should be taken into consideration when interpreting egg and larval count figures.

With reference to total egg counts, no hard and fast lines can be drawn, but we consider that an *average count* of less than 100 e.p.g. for the horses on a stud indicates that there is no acute problem, and that no immediate steps need be taken. Averages of 100 to 500 e.p.g., always provided there are no individual high figures, are in the category of "marginal." If the majority of the horses are young—under two years old—it is highly unlikely that in a subsequent examination three months later the figures will be the same or less. They are almost certain to show a very considerable increase. Where the majority of the horses are adults—mares or geldings—the average figures may well be the same at subsequent count, or even less, depending on the time of year. Therefore, with results between 100 and 500 e.p.g., young horses should generally be treated, but adults need not be dosed.

Figures which average above 500 e.p.g. for a stud indicate quite definitely that control treatment is required, and urgently so if there are several young animals included.

So far as differential egg counts are concerned, we find that in four- to five-month-old foals, very many animals show a preponderance of ascarid eggs. This is partly because the prepatent period for ascarids is only about 90 days, and embryonated ascarid eggs can be picked up by the foal from loose-boxes, floors, etc., soiled with faeces, from a very early age, almost as soon as the foal begins to live an independent life at three or four days of age. It is also partly due to the greater susceptibility of the young foal to ascarid infestation; it is notably more easy to infest artificially a foal of one month than it is one of five or six months, and partly because the strongyle species as a whole have an intermediate phase of their life history as free-living larvae on grass, and the prepatent period in most of them is longer. Oxyurid and tapeworm eggs are not usually encountered until about six months or older, though there are exceptions.

Contrary to many authorities, we do not tend to dismiss somewhat lightly ascarid infestations in foals. We have seen so many young foals of from about three and a half to five or six months of age which in spite of good feeding cease to thrive, become less active and though perhaps not exhibiting definite clinical symptoms, cannot be considered as continuing to thrive and grow normally. If nothing is done, a few may show the pot-belly, "raised spine" (which means a sinking of the dorsal muscles), and thin narrow ligamentum nuchae, which are typically associated with worms. Others appear to recover more or less. To appreciate the significance of these early symptoms, the result of dosing with an efficient ascaricide at about three and a half, four and a half and five and a half months is sufficient. Dosed foals commence to thrive at once and continue to do so, outstripping their undosed companions.

Further, as the result of careful *post-mortem* examinations my colleague Dr. Farrelly and I have noticed many times in liver and lungs the damage caused by ascarid larvae during their migrations through these organs. In fact, the so-called "summer colds," in which there is coughing and a whitish nasal discharge, often restricted to, or more marked at, the right nostril, sometimes with demonstrable bronchitis, is often due to the lung migration phase of ascarid (and sometimes other) worm larvae. These "summer colds" fail to respond to antibiotic treatment, and usually clear up spontaneously in from three to five or six weeks; they appear irrespective of weather conditions.

Methods Available for Control

Objective.—Methods vary according to the object it is desired to achieve. I suppose complete control and eventual eradication of parasite worms on a stud should be our real objective. I do not think this is impossible, but I am afraid most clients would regard it as impracticable, and would be unlikely to face up to the expense and the trouble involved.

In consequence, we have to be satisfied with something less than absolute eradication. The actual details will vary with the varying conditions on each premises, and it is really only possible to concentrate on general principles, the variations of these being decided according to each case.

A reasonable objective may be defined as the achievement of such control of helminthiasis that all horses on a premises harbour as few worms as possible, and these to be the least harmful species.

Principles.—I think it helps to define the main principles on which control in a breeding stud must be based. They are as follows:—

1. Regard the premises as a unit composed of all the animals of the equine species living on it.
2. Shelter the foals, yearlings and two-year-olds from infestation until they develop their own natural age resistance.
3. Maintain good general and specific nutrition of all young growing horses and of in-foal mares.
4. Regard the problem as a continuing one, not as a series of episodes, and adopt a regular routine system of control at arranged intervals.
5. Take the necessary steps to prevent a sudden access of fresh infestation of the premises by checking the worm burden carried by fresh arrivals.

It will be necessary to consider the application of each of these in some detail.

(1) *The Horse Population Unit*

This can be briefly discussed. We have encountered instances where efforts have been made to control worms on premises, but where after a preliminary degree of success, infestation has again become heavy. In such the reservoirs of infestation may be one or more horses which were not included in the original control scheme. In one case, the children's ponies were responsible ; in another, an old heavy horse which did carting jobs about the premises and was turned out to graze with the yearlings. The odd hack kept for riding, the old hunter, a donkey, an old pensioner, or some horse of perhaps little consequence, may be responsible for maintaining the source of infestation.

(2) *The Young Stock and Age Resistance*

This is probably the most vital principle, and the one to which much attention must be paid. Our work at Newmarket among our own experimental ponies, and in other horses, has proved very conclusively that the principle of what Dr. E. L. Taylor, of Weybridge, calls "age resistance" is of commanding importance. Briefly, it is that as the animal gets older and more mature, it is less easily infested by parasitic worms, and of course, conversely, the younger the animal the less is its resistance. With perhaps a very few exceptions, this principle applies to all species of farm animals, and is most important in foals and lambs.

We have found that foals raised nearly "worm free," and kept free from infestation until they are about 19 to 20 months of age, can be put on to heavily contaminated pasture, and though they will acquire some worms they will not achieve a high worm burden, nor will they suffer clinically, as will foals of six or seven months on the same pasture.

The practical steps to ensure this relative freedom are as follows :—

(*a*) Control parasitism in the in-foal and suckling mares ;

(*b*) Protect the young foal from infestation with embryonated ascarid eggs, by good cleansing and disinfection of the foaling box and the loose-box in which it is housed ;

(*c*) Provide fresh clean young grass for the mares and foals up to weaning, and for the foals and yearlings subsequently.

In-foal mares can safely be dosed with reasonable doses of phenothiazine up till two months before they foal. The dose may be given as a whole ; or it may be divided into three or four equal doses which are each given daily for three or four days. Subsequently they may be put on to the low-level dosage system for 21 days. After foaling they should again be given a 21-day course each month until the foals are weaned.

Phenothiazine, even in full doses, does not necessarily kill all adult egg-laying worms. In horses given full doses (30 to 36 grammes) and killed subsequently, counts of surviving adult strongyles (various species) up to 180 worms (both sexes) have been obtained. There is, however, no doubt that egg laying by any surviving worms is markedly depressed and, further, the hatchability of any eggs passed is nil or very low indeed, for about a week after dosing. Subsequently, if they are put on to low-level dosage for 21 days or so, the non-hatchability of the eggs passed continues. It takes about a week to 10 days after the end of the low-level dosing period before hatchable eggs are again passed. In this way, even if the mares themselves are not cleared of worms they cease temporarily to be factors in maintaining the level of infestation of the grazing pastures, and on clean leys they do not build up the worm larval content of the herbage, from which their foals can be infested.

Gibson (1950), of Weybridge, has shown that continuous dosage every day for a year can be tolerated by ponies without harm. However, an occasional horse seems to be rather more susceptible, and since in practice equally good results have followed the 21-day period of dosing each month, with an opportunity for the intestines to clear themselves during the 10 or 11 days remaining, we find it unnecessary to give the daily dose continually. A useful instruction is to dose for the first three weeks of each calendar month, then stop until the beginning of the next month and repeat.

When the foals are weaned, if they can go on to a clean ley, which may perhaps have been hayed earlier in the season, and which has carried no horses, they have an opportunity to pass their first winter under conditions where few or no infective stage larvae can be picked up. They should remain on this or on similar clean ground for their second summer and autumn, a check count being made occasionally to ensure they are remaining free (or nearly free) from worms.

The use of bullocks as "larval collectors" on pastures carrying horses is excellent. Under these conditions, horses will very probably contract a small infestation with *Trichostrongylus axei*, but contrary to what is seen in cattle, horses seldom or never harbour large numbers and appear to be unaffected clinically by this worm. It is one of the few to be found in the stomach of the horse, possibly because the tough non-digestive mucosa of the cardiac portion limits its opportunities. With the exception of *Trichostrongylus axei*, the bovine and equine nematodes are specific and larvae of equine worms eaten with the grass by bullocks fail to develop in them.

The routine collection of dung from the pastures twice weekly is practised on most well-managed studs where the number or the value of mares and foals warrants it. An old, quiet draught horse is used, and it is of course essential that it shall not be heavily infested. There is probably not so much need to carry out this tedious and quite expensive procedure if the mares themselves are kept with a very low egg output by phenothiazine low-level dosage, but elsewhere there is no doubt that if dung collection is done conscientiously it does a good deal to keep down pasture infestation with larvae and embryonated ascarid and other eggs.

(3) *The Influence of Nutrition*

This in all species is most important. I need not do more than remind you of the vicious circle associated with poor nutrition → parasitism → worse nutrition → worse parasitism. It has been noted that all young animals when receiving a full supply of milk are more able to withstand parasites than otherwise, and the practical addition of whole milk, skim milk, or dried milk powder to the foal's rations after weaning and during its first winter, which is not uncommon, is sound policy from this point of view. Safe milk should be used.

The periods when nutrition may well be faulty in the life of the foal are firstly at and after weaning. Some foals suffer markedly at weaning, both physiologically and psychologically. It is not unusual for some foals to fret and sweat badly, cease to feed, and even run a temperature for two or three days after separation. If at the same time they are heavily parasitised, the results can be serious. Drastic vermifuge treatment arranged to coincide with weaning, though perhaps convenient, is not the best policy. It is better to carry out the first vermifuge treatment before weaning, and a second one several weeks subsequently when the foal is well on to its feeding and has forgotten its dam.

Later, at about seven to nine months of age, many foals

will go temporarily off their food, or will not feed well and clear up. This is generally due to pain in the jaws occasioned by cutting the two temporary corner incisors, and the fourth permanent molars on each side upper and lower. This latter is a big tooth, the first permanent molar to come through, and seems in some foals to cause considerable pain and discomfort in chewing, leading to a lowering of nutritional intake. On the other hand, many foals have no such teething troubles and show no nutritional check at this age, or, possibly more correctly, it passes unnoticed.

It is desirable when considering foal nutrition to pay attention to minerals and vitamins. The grazing horse on good pasture in spring and summer almost certainly obtains adequate supplies of each. During winter, however, summer-stored reserves are used up and extra calcium, phosphorus and magnesium are needed. A good mineral mixture, with a proportion of bone meal, is adequate. If the area is known to be deficient in iron, copper, cobalt or iodine, these minor elements should be included in the mixture.

Vitamins are important, especially A, D and E. The position regarding the major members of the B complex and C is difficult. We know that between early September and late December there may be a fall in blood ascorbic acid and in some of the B members, by as much as 30 per cent. where foals are shut in without access to green food. We also know that blood values change very rapidly and until more work is done it is impossible to be dogmatic. Foals given a supplement of ascorbic acid and the more important B vitamins show better growth and development than unfed controls. Parasitic worms are of great importance, since dried and ground intestinal worms, especially ascarids, are a rich source of vitamins, and it well may be that some of the poor unthrifty general condition of worm-infested foals is due to deprivation of the system of vitamins A, D and C and perhaps others—the young animal's normal supply being taken by the worms. In the treatment of parasitism clinically, an effort should be made to replace some of the lost supplies artificially, by cod-liver oil and yeast or by some other means.

(4) *The Dynamic Nature of Equine Parasitism*

Attacking the adult parasitic worm in the horse's intestine by administering vermicides or vermifuge preparations, is not enough to effect good control. The effect must be sustained, and repeated dosings are essential. At any given time, a young horse can be expected to have adults, males and females in the alimentary canal, larval forms of ascarids and of strongyles (large and small) in process of migration through liver, lungs, or various areas of the abdominal cavity, and may well also have hundreds or thousands of various *Trichonema* sp. undergoing their resting phase, buried in the submucous tissues of the right dorsal colon. No direct indication of the presence of larvae, encysted or resting forms, is obtainable in the living horse. In two or three months' time these forms will have matured and a new swarm of adults may well have replaced those eradicated by the treatment given earlier, and in the meanwhile the horse may have picked up from the grass of the pasture a further supply of third stage (infective) larvae which are undergoing their migrating or resting stages in turn.

To gain control of equine parasitism, a sustained rather than an episodic approach is needed.

A method which promises well is to adopt a quarterly examination of each horse on a stud. Samples of faeces are examined, egg counts made and differential larval counts carried out, for each horse on the premises. Scrutiny of the results indicates which animals require dosing and what drugs are appropriate. There may, if desired, be a second series of faeces examinations to serve as a check on the success of the first administration. Low-level dosage may be carried out as mentioned earlier. After three months the same process is repeated. Some disappointment in the early stages of such a campaign is likely, for many of the young horses left practically clear after the first dosing may be found as bad again as before. Gradually, however, it will be found that the counts begin to decline and very heavy egg counts (*e.g.*, over 3,000 e.p.g.) are not encountered. This is the stage when control is beginning to become a reality. Later, according to progress, the three-monthly dosings may be changed to four-monthly or less frequent if circumstances warrant.

(5) *New Arrivals*

Complaint is frequently made that mares go to public studs with low worm burdens and come back heavily parasitised. Conversely, public stud owners often complain that mares which come to them to foal and be served are "filthy with worms," and contaminate their paddocks, their own and other mares' foals. Faults are probably to be found on both sides, and a joint effort is needed.

The principle of regarding all horses coming on to a stud where helminth control is in progress as potentially dangerous is a good one. It does not take long to quarantine the horse, have a sample of faeces examined and dose the horse before it joins the rest and becomes subject to the same control they are undergoing.

Conclusion

I make no apology for not being able in the time available to try to discuss many other facets of this complex problem. I hope I have been able to put some aspects before you which may be of interest and use. I have not quoted many authorities but a list of useful references is appended ; much of what I have suggested is based on work still in progress at Newmarket.

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Discussion

Points from the discussion were as follows :—

Mr. J. D. Peele asked whether it was better to plough up paddocks and reseed them direct, or to take a crop of some other sort before reseeding. This was a common query that he encountered and he was in some doubt as to the answer.

What should be done to eradicate ascarid eggs from a building? He appreciated the danger they constituted and would like to know how best to get rid of them.

With regard to mares, was it suggested that the 21-day low-level dosing system should commence, for the mare, after foaling? If not, when should this low-level dosing begin?

He also wondered, in relation to new arrivals on a stud, whether, if they were heavily infested, a single dose of phenothiazine was sufficient.

With reference to the staining of the urine, was it not the case that there was some staining in every horse which received phenothiazine? This, at least, was his impression.

Mr. Peele also raised the question of coccidiosis in horses. He wished to know how serious was the presence of coccidia in the faeces and what were the clinical symptoms of coccidiosis.

Mr. T. M. Mitchell raised the question of the relationships between parasites and vitamins. He had noticed cases in which leg mange, in the horse, due to symbiotes, had shown certain and virulent increase in spread and intensity coinciding with a heavy worm infestation. He wondered whether there could either be an association between toxins produced by the worms, encouraging spread of the ecto-parasite, or a vitamin deficiency. He mentioned this because the skin in these cases showed an excessively scaly condition over the affected parts of the body, and tufts of hair could be plucked extremely easily from the skin.

With reference to the age resistance factor in worm infestation, could the essayist explain why middle-aged or even elderly horses quite often acquired infestations with trichonema heavy enough to produce clinical symptoms?

Mr. J. B. Harmar asked about age resistance. While he appreciated Dr. Taylor's general theory, he wondered whether the development of some sort of anti-toxins, produced as a result of low-level infestations with worms, might give the animal some protection against further attack by the parasites.

The Reply

Mr. Miller: In answer to Mr. Peele, the question of ploughing up was not so straightforward as one might think. A very great deal depended on the depth at which the ploughing was carried out. With deep ploughing, say 11 to 14 inches, and with a perfect turn-over of the furrow slice, the infected herbage mat was well buried and, especially if a heavy furrow press was used as well, it was unlikely that many worm larvae would reach the surface to contaminate a subsequent crop. The essayist believed that the larvae could travel 8 inches vertically as a rough maximum but a great deal depended upon the friability of the soil, whether it was sticky, heavy clay or free-working, open, fibrous loam. There was no doubt that after shallow ploughing or merely skimming the surface of a pasture to a depth of only 4 inches or so, and especially if "duck-foot" harrowing was carried out afterwards, many larvae could reach the surface and if direct reseeding occurred they would be well able to contaminate the new herbage growth. As a policy of safety it was undoubtedly much better to plough and then take one or two straw or root crops before reseeding the grass for grazing in the future. The whole question, however, was an extremely difficult one since there were so many variations in soil structure, climate, altitude, rainfall, etc., in different parts of the country. In consequence, it was, he felt, very unsafe to be dogmatic.

With regard to the question of dis-infestation of buildings against ascarid eggs, the principles were, firstly, to cleanse thoroughly, preferably with a pressure hose-pipe; then thorough scrubbing and scraping with a hot detergent or fat dissolving solution, and subsequently to carry out disinfection with a reliable disinfectant used at about twice the strength normally employed for bacterial work. There was no doubt that the shell of the ascarid egg was extremely resistant and *in vitro* work showed that it could resist immersion in many weak disinfectants and even in 2½ per cent. formalin solution, for a number of days. It seemed that greater reliability should be placed on very thorough cleansing, scrubbing, etc., than on the use of a disinfectant without cleansing.

With regard to mares which had been relatively free of worms before foaling on a heavily parasitised stud, it was essential to commence the 21-day low-level feeding system two or three days after foaling and to continue it during the sucking period. He would remind them, however, that on a stud where the ground was already heavily infected, the preparation of clean, fresh pastures was just as important for foals as the control of the heavy worm burden in the mares. The two things were strictly complementary; both were essential.

The quarantining of new arrivals was always a difficulty. Animals with a very heavy infestation might require more than one dose before they were safe to join the other horses and be treated as units in the general scheme. For example, a horse coming in with 5,000 or 6,000 e.p.g. to a stud where the general average was under 500 e.p.g. would almost certainly require two big doses of phenothiazine at perhaps a week's interval before it could be regarded as satisfactory. While the egg count was not an absolute arithmetical index of the degree of worm infestation it was a very useful general guide and if a horse showed two or three consistently low counts, it could be regarded as satisfactory.

The staining of the urine a reddish or pinkish colour practically always occurred with full doses of phenothiazine but the colour might be so faint as to elude detection. With the low-level dosages or with the split dosages, there was usually no such coloration. In an animal which had white hind fetlocks, the splashing would be noticed more readily than when the hind feet were of a dark colour—black, brown, etc.

Coccidiosis presented a problem. In Britain there could not be any very serious clinical coccidiosis in horses. Coccidia and coccidia-like bodies were occasionally found in samples of horse faeces but most of these were undoubtedly of rabbit, fowl, or bovine origin, the horses having grazed on contaminated pastures. The coccidia were apparently taken in quite accidentally and passed out again in the faeces. At Newmarket, the Station had been consulted several times regarding coccidiosis and on each occasion the evidence was extremely unsatisfactory. Dosing horses with oocysts in quantities numbering several millions and a careful search of the faeces subsequently daily for a week showed only a few coccidia being passed and the presumption was that most of them were probably digested. The horses themselves showed no symptoms whatsoever. There had been reported in the literature the recovery from horses of a coccidium to which a specific name had been given, but authorities obviously placed little or no importance on this organism. Further, they had found no references in the literature of any outbreaks of coccidiosis in horses in Britain.

Mr. Mitchell's observations were very interesting. The essayist thought it was quite possible that one of the factors in the sudden spread of symbiotic mange, which was normally rather a limited infestation, might well be a deprivation of vitamins, but it was probably only one of the contributory factors.

The *Trichonema* species were very, very common indeed in horses and provided the numbers were not heavy, the horse seemed to suffer only a very minor disturbance. On the other hand, when trichonema worms were present in large numbers they should be regarded as serious factors. Poor nutrition always seemed to encourage an increase in *Trichonema* species very markedly and they should by no means be disregarded. The only safe principle was to keep all species of parasites at the lowest possible levels and to ensure that horses, especially when young, were given the best nutritive conditions that were practicable.

Mr. Harmar's query regarding age resistance might lead to a very prolonged discussion. A great deal of work was being carried out on the whole question of resistance and anti-toxins but there were serious difficulties in reaching firm conclusions. It was quite possible that the relatively slow elaboration of some sort of anti-toxic agent might contribute to protection with increasing age. The general maturity of the tissues and the greater vigour of the adult in resisting infestation were definite facts whatever the detailed explanations might be.

POST-GRADUATE AGRICULTURAL SCHOLARSHIPS

The Ministry of Agriculture and Fisheries and the Department of Agriculture for Scotland propose to award, for the academic year beginning October 1st, 1953, or earlier, a limited number of post-graduate scholarships in Agricultural Economics, Husbandry, Statistics and Agricultural and Dairy Engineering. The closing date for applications is May 1st, 1953. Further particulars can be obtained from the Secretary, Ministry of Agriculture and Fisheries (Research Branch), 1-4, Cambridge Terrace, Regent's Park, London, N.W.1, or the Secretary, Department of Agriculture for Scotland, St. Andrew's House, Edinburgh, 1.

7, MANSFIELD STREET, W.1*

One hundred and eighty years ago, 7, Mansfield Street, was built under the supervision of Robert Adam, in accordance with plans prepared by him a year earlier. The original lead water tank which stands in the courtyard bears witness to the year 1773.

The authoritative account of the work of the Adam brothers is called "The Architecture of Robert and James Adam." It was prepared by Arthur T. Bolton, Curator of the Sir John Soane Museum, and was published in 1922.

In his book, Professor Bolton has chosen 7, Mansfield Street, as the most typical Adam house in Mansfield Street and he has included the plans of the house, which show that the projecting wing was originally built only as far as the first floor; he also included photographs showing the front door, both the ceilings of the drawing-rooms and a view of the stairwell. These same illustrations, together with much of the text of the book, had already appeared in *Country Life* in March, 1917.† Adam's own designs for the drawing-room ceilings exist in the Soane Collection. The plaques on the staircase are believed to be the work of Joseph Rose, the plaster worker who was employed by Robert Adam at Syon House and elsewhere.

Although the house cannot be described as being of outstanding interest, it is probably the best of its kind—a typical small town house. Its present excellent condition is due to the great care and trouble taken by the late Dr. Geoffrey Evans, who lived in it from 1934, and it is from his family that the British Veterinary Association now buy.

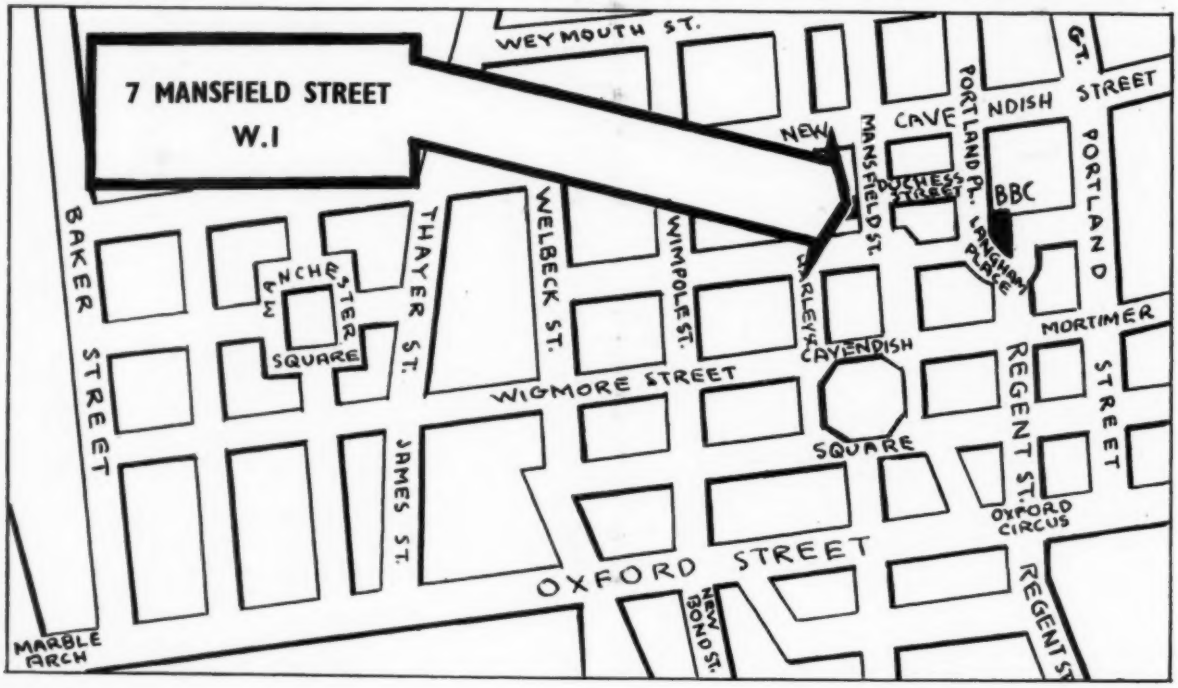
When Dr. Evans moved into the house it had been empty for some two or three years and it was in need of extensive repair and redecoration. At this time the large larder which occupied the courtyard well was removed, as was the bow window which projected out of the first-floor wing room. This made the house much lighter. The large old kitchen was left as a store room, where the original charcoal braziers can still be seen; and a new small kitchen was made out of the saddle room and the housekeeper's sitting-room. The stables were adapted to their present purpose of garaging cars at that time also, when the smell of horses still pervaded the mews premises.

Finding that the fireplaces had been removed, Dr. Evans approached Lord Howard de Walden, who kindly arranged for the gift of the four fireplaces which now stand in the two main ground-floor and first-floor rooms. These fireplaces came out of Adam houses in Portland Place which were being demolished at the time and were given on the understanding that they would always remain part of the house. The mantelpieces have the normal Adam characteristics of a narrow shelf placed relatively high. In the back room on the first floor, the middle panel had been taken away from the mantelpiece, so that the top of it should stand lower. Designs in the Adam style were obtained and a craftsman commissioned to make a panel to replace that which was taken away. Although the design is one which Robert Adam might have used, it is interesting to note how the modern craftsman lacks the touch of the craftsman of days gone by.

The door handles on the first floor are of modern manufacture from original Adam casts.

There are a number of other features which bear the hallmark of the man who designed the house. The built-in bookshelves in the ground-floor back room have the grooves by which the shelves may be adjusted, which are a feature of the period, as also are the hinges of the cupboard doors. There remains, too, the open gutter which carries the water from the front to the back of the house. This open gutter runs underneath the main roof and is a favourite nesting place of a pigeon, which is no doubt looking forward to the very best care and treatment for itself and its family from the B.V.A.

On the second floor opposite what was, originally, the best bedroom, there is a spacious room cupboard, which was a



* Contributed by members of the family.

† See page 94 and following pages of the second volume of "The Architecture of Robert and James Adam."

No. 7, MANSFIELD STREET, LONDON, W.1.

First Floor Front, with Adam ceiling and mantel and Perry chandelier. To be main Committee Room.

Entrance hall and main staircase.
Inset: Head of stairwell showing Adam decoration.

powder closet in days gone by. If, when you have looked into this room, you then turn to the balustrade and look down the stairwell, you can almost imagine the bewigged gentry of those days walking leisurely up the main front stairs to meet their host and hostess.

The house was first occupied by Mr. Robert Burdett, who took it in 1774 at a rental of £300 a year, which must have been a high value at that time.

In the 1830s General Sir James Walker, of Peninsular War fame, lived there for a while. It is believed that it was he who moved the Adam fireplaces from the house and put them into a house he bought in the newly built Sussex Square. Sir James Walker was the great-great-uncle of Dr. Evans ; so it was fitting that the great-great-nephew should remedy in the 1930s the alteration of the 1830s, and restore to the rooms the beauty of Adam's fireplaces.

For the 50 years up to 1932 Mr. Waters and his family had lived in the house, entertaining a wide circle of artistic and literary friends. Mr. Waters translated many Italian books and was an outstanding amateur woodcarver.

Just prior to Munich, at the advent of the second World War, Dr. Evans made plans to safeguard the house and its contents in the event of the outbreak of hostilities. Automatically, therefore, on the declaration of war, removers came and took away the contents of the house, together with the two beautiful Perry chandeliers which had been bought to complete the furnishings in its traditional style. The chandeliers, together with the other possessions, were stored in a farmhouse in Worcestershire and thus they survived, without damage, the severe bombing which shook the structure of the house. The large plate-glass windows had been removed and replaced by boards, and building materials of all kinds had been collected in the basement for prompt repair of the roof and other essential parts of the house.

The house was, in fact, hit twice. On the first occasion a fire bomb passed unnoticed until it had burned its way through the top of the house into the second-floor back room. Considerable quantities of water had to be used to put out the fire and it is remarkable that the room below was almost undamaged, despite water lying 2 or 3 inches deep on the floor. The reason for the lack of damage to the wallpaper was that this is hung on boarding which is attached to the walls, but owing to the rough nature of the walls there is a gap between them. In the days of Robert Adam, the method then employed for paper-hanging was to paste the paper to strips of hessian hung from the walls. Consequently, the walls were always left in rough-finished brick.

The second fire bomb hit the wing roof and was spotted much earlier, consequently the fire was controlled before much damage had been done.

The third incident which affected the house occurred when a high-explosive bomb fell on the block of buildings which used to stand on the B.B.C. extension site down Duchess Street, across Portland Place. The blast and the suction which followed it pulled at the front wall of the house. Even in the 18th century it was the custom to pack the gap between the inner and outer wall of the house with rubble and once the outer wall was slightly pulled outwards the weight of the loose rubble above began to exert itself, and a few years after the war repairs became necessary and nearly all the front wall was rebuilt from just below the ground level to 3 or 4 feet above the first-floor level.

From 1934 until his death in 1951 (including all the war years) Dr. Evans carried on his practice as a consulting physician. At the end of the war the various members of the family returned home to find it ready for them and the family was joined by Dr. Evans's sister, Miss Evans, and by his father-in-law, Lord Maenan, who made the house his London home until his death, at the age of 97, also in 1951.

During the last two years hospitality has been given to the Steering Committee of the College of General Practitioners—and the house can therefore claim to be the birthplace of that important medical body.

So now it is that this treasured house passes for safe keeping into the hands of the British Veterinary Association. Standing as it does within the medical precincts, as laid down by the planners of to-day, it is a fitting home for the Association, and it is hoped that the members will appreciate the house as greatly as others have done before them and will there enjoy many years of happy and successful occupation.

THE ASSOCIATION'S NEW HEADQUARTERS

IN 1937 we stated in an editorial that " the acquisition of a house as Headquarters may be said to be a Coronation Year gesture on the grand scale." History has repeated itself, for in 1953, after 16 years' occupancy of 36, Gordon Square, W.C.1, the British Veterinary Association—as our organisation is now named—will move, on a date to be announced, into the second house in its ownership : 7, Mansfield Street, W.1., standing in an imposing terrace situated between Portland Place and Harley Street. We are indebted to those who for many years found therein a treasured family home, for the description which appears in this issue. This gracious house of Adam design and erection has now passed into the proud possession—and careful custody—of the Association under circumstances well known to its members.*

It is fitting that we should recall the stages in our journey thither. After a decade and a half of experience of cramped life in " rooms," during which we progressed from an eyrie in Buckingham Palace Road to the occupancy of " chambers " in Gray's Inn, the Association, in 1937, became the possessor of a house of its own, " No. 36." The handsome corner building within the university area of London has served us well in meeting the demands of a membership more than doubled from the 1,800 of that year and the requirements of a vastly increased range of secretarial, committee, editorial and other activities.

Although it does not occupy quite so commanding a position as the present Headquarters, our new house has a fine exterior and an infinitely more gracious—and spacious—interior. The change, indeed, is quite in keeping with the growth in size, influence and prestige of the Association. Transference from the academic to the consultant area will bring us to an equally congenial environment, with Headquarters rendered easy of access by their proximity to Oxford Circus.

The British Veterinary Association has embarked upon a further venture of faith, firm in the belief that it will have the full support of the profession for which it works and that membership will be maintained at even higher levels than before. It is a move to be welcomed provided that the actual and potential usefulness of the Association is realised by all those in or eligible for membership. As our President recently has reminded us, there must be no gaps in that membership, due either to omission to apply for, or to retain, the privilege.

The thanks of the Association are due to the President for his efficient leadership in this matter ; also to the special committee for their good taste in acquiring a house of such character, and for their expedition in grappling with the emergency situation created by the expansion of the University of London.

* *Vet. Rec. Suppl.* (1953). **14.** 45.

CLINICAL COMMUNICATION

SYNGAMUS IEREI, PHYSALOPTERA PRAEPUTIALIS AND *PLATYNOSOMUM FASTOSUM* FROM A CAT IN JAMAICA

P. D. L. GUILBRIDE,

VETERINARY INVESTIGATION OFFICER, JAMAICA

The following case is recorded because of the unusual discovery of three species of helminths described for the first time in Jamaica, all of which occurred in the same host and because one of them, *Syngamus ierei*, has previously been reported only from Trinidad.

Subject.—A six-year-old, female, Blue Persian cat.

History and Symptoms.—The cat belonged to an urban family known to the author and was well looked after. Late in 1951 it had a litter of kittens, two of which were responsible for infecting four persons (three adults and one child) with ringworm. Early in 1952 it became thin, had fits of sneezing and choking and developed a nasal discharge. Since it did not now enjoy the esteem and affection it had held before the ringworm episode and because of the chronic nasal catarrh and coughing fits, it was destroyed.

Post-mortem Findings.—On examining the upper respiratory tract to determine the cause of the nasal discharge, a number of bright red worms, about ⅜ inch long, were observed attached to the mucous membrane of the upper nares. These were extracted and found to be typical of the genus *Syngamus*, the male and female being in permanent copulation. Examination of the trachea revealed two small flukes in the anterior end, but extensive search in the lung tissue failed to reveal any more. The stomach contained numerous unattached ascarid-like worms and there were a few hookworms in the small and large intestines. The liver was enlarged, and on being cut was found to be packed with flukes. The gall bladder was drained by syringe and the gall fluid centrifuged at 3,000 r.p.m. for five minutes. The sediment was then examined and was found to contain numerous eggs.

Identification of the Helminths.—The species from the upper nares was *S. ierei*, described by Buckley in 1934 as a new species in cats, in Trinidad. The ascarid-like worms from the stomach were *Physaloptera praeputialis* and the liver flukes were *Platynosomum fastosum.*

DISCUSSION

S. ierei has been reported only in Trinidad, where nearly 50 per cent. of 32 cats examined were found to be infected with it (Buckley, 1934). Of five cats examined since the case described above, none harboured this parasite. The life history of *S. ierei* has not yet been determined.

P. praeputialis (Linstow, 1889) has been reported from Asia, Java, Africa, Brazil and is, evidently, common in the dog, cat and fox in the United States. On casual observation it is easily mistaken for *Ascaris* and this is probably why it has not been reported previously in Jamaica. The intermediate hosts include the cockroach (*Blatella germanica*) and the field cricket (*Gryllus assimilis*) (Petri & Ameel, 1950).

P. fastosum (Kossack, 1910) has been reported from Malaya, British Guiana, Brazil, Panama, the West Indies and the United States. Maldonado (1945) confirmed that the snail *Subulina octona* is the intermediate host both experimentally and in nature. The miracidium hatches within 15 minutes in the crop of this snail, the daughter sporocysts becoming encysted in the common bile duct of the lizard *Anolis cristatellus*. The cat acquires infection by preying on infected lizards. Kouri (1952) states that this parasite is very common in cats in Cuba. The author has found either the flukes themselves or their eggs in every one of five cats autopsied since the case described above.

Note.—S. octona is one of the commonest land snails in Jamaica, being about 1 inch long, with a translucent pale-straw-coloured shell. It is found in flowerbeds and in all kinds of garden rubbish (Jacobson, 1950). *A. cristatellus* does not occur in Jamaica, but is found very commonly in Porto Rico. Analysis of 100 stomach contents yielded remains of beetles, cockroaches, grasshoppers, ants, caterpillars, bugs, flies, spiders and vegetable matter (Schmidt, 1928). The most common species of Anolis in Jamaica is *A. lineatopus*, the other two being *A. grahami* and *A. opalinus* (Underwood, 1953).

CONSIDERATIONS

There is a condition, commonly seen in cats in Jamaica, characterised by wasting, sometimes accompanied by sneezing and nasal discharge, known locally as "tissic." It is thought that either *P. fastosum* or *S. ierei* or both these parasites together may be responsible for this syndrome. The popular opinion is that cats contract "tissic" from eating lizards. Since it is known that *P. fastosum* is transmitted to cats by ingestion of infected lizards, it is possible that this parasite is the main cause of the condition and that *S. ierei* when present causes the nasal discharge. It is possible, too, that the life cycle of *S. ierei* involves the lizard. Only one cat with "tissic," other than the case described above, has been examined and in this no *S. ierei* were found, the liver, however, was heavily infected with *P. fastosum.*

Acknowledgments.—I am greatly indebted to Professor J. J. C. Buckley, of the London School of Hygiene and Tropical Medicine, for the identification of these helminths and to the Director of Agriculture, Jamaica; for permission to publish this note.

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ANAESTHESIA RESEARCH

John Wyeth Brothers, of New York, have given £5,000 to the Faculty of Anaesthetists of the Royal College of Surgeons for scholarships for overseas students in need of financial assistance. Announcing this at the annual dinner Dr. Bernard Johnson, dean of the faculty, said that at present they were unable to undertake even the simplest form of research. There should be a department in the College where the best possible brains could devote all their skill to investigation and experiment with no other demands upon their time.—*Pharm. J.*

* * * * *

Replacements of international standards for insulin and penicillin have been established. International biological standards have also been established for *Brucella abortus* antiserum (for diagnostic purposes), for scarlet fever streptococcus antitoxin, and for dimercaprol.

ABSTRACTS

Aureomycin in Retained Placenta in Cows*

This report presents the results of uterine medication with aureomycin oblets following retained placenta in cows.

Each oblet is composed of 0·5 gramme crystalline aureomycin hydrochloride in a soluble, non-irritant base compressed into a 5-gramme oblong tablet. Where complete manual removal was accomplished or where portions of the placenta remained, one oblet was introduced 24 to 50 hours after parturition, 15 to 35 grammes stilboestrol being administered intramuscularly at the same time. Where removal of the placenta proved difficult, one oblet was introduced and manual removal delayed for 72 hours. In most cases this proved much easier than previous experiences with other forms of therapy.

Over a period of approximately one year 612 cows with pathologically retained placenta were treated in this manner. In 610 cows there was no clinical evidence of post-operative infection or septicaemia. In two cows where membranes were only partially removed, acute metritis developed.

The organisms considered to be involved in *post-partum* uterine infections are mentioned briefly and the bacteriostatic activity of aureomycin against many of them is set out in a table.

The results of using these oblets in 12 cows after abortion due to brucellosis do not seem very promising, and there is no mention of, nor are comparisons drawn with, the use of penicillin in this field.

J. C. H.

* **Prophylactic and Therapeutic Use of Aureomycin in Retained Placenta in Cows.** Beattie, J. H., & Leaming, J. D. (1952). *Vet. med.* **47.** 451–452.

* * * * *

Blood Circulation Through Canine Kidney*

In an attempt to clarify the controversial question of intra-renal circulation the author has examined a series of dog kidneys, many excised from fresh specimens and injected with resins, together with a limited number excised following *in vivo* injections of India ink and epinephrine. The resulting casts were examined with the naked eye and microscopically. The multiple nature of the terminal part of the main renal artery was confirmed and the interlobar arteries were found to branch into arcuate vessels at the cortico-medullary junction. These vessels leave at an acute angle and radiate toward the periphery where they sub-divide into numerous interlobular arteries, from which yet smaller vessels pass to the glomeruli. The retrograde veins take origin from the capsular area.

Detailed examination failed to reveal the presence of two independent circulatory pathways as is claimed by Truetta and his co-workers, nor was it possible to demonstrate a significant difference in diameter between the efferent vessels of the juxta-medullary and those of the outer cortical glomeruli.

C. W. O.

* **Blood Circulation Through Canine Kidney.** Christensen, G. C. (1952). *Amer. J. vet. Res.* **13.** 236–245.

REVIEW

[**Linton's Veterinary Hygiene.** (Fourth Edition (1953): A. N. Scorgie and W. A. Willis.) Published by W. Green & Co., Ltd., St. Giles Street, Edinburgh, 1. Price £3 net.]

We welcome this further revised edition of a well-tried and well-known text-book. As the authors say in their preface, the rapidly changing times demand an all-too-frequent revision. In spite of the fact that the third edition was published as recently as 1940 much has happened since then to justify bringing this book yet again up to date.

In reproducing a text-book, especially when this has already impressed its character upon its loyal band of readers, one of the greatest difficulties must be to know how far to deviate from the original format. In a sense we feel that perhaps a reluctance to compromise in this direction has been a handicap to the overhauling of this essentially veterinary publication. It tends in places to be diffuse, and here reduction might have been exercised to advantage. The section on sanitation, for instance, is littered with a vast number of beautiful line drawings and detailed designs of buildings such as only an architect or surveyor would require. As the blocks were already there no doubt the cost of reproduction was not an influencing factor, but this whole section tends to be overbalanced at least in so far as the requirements of the veterinary student are concerned. More photographs of actual buildings—light, temporary as well as semi-permanent—helpfully could have been introduced, though the reproduction of photographs in contrast to that of the line drawings is one of the poorer features of the book. It is probably an advantage to know the actual measurements, but the essential principle behind the designs is more important and the rest can be left to the builder.

The major problem in a work of this nature is to know when to stop. The term " Veterinary Hygiene " is an all embracing one and its limits have exercised the minds of teachers and examiners alike. Each has his own private view of the size of the net and the needful contents. Whilst Section 5 on the Control of Contagious Diseases has dealt adequately with the problem of disinfection in general and with the control of the scheduled diseases, brucellosis and mastitis seem a little out of context. We feel also that it might have been an advantage, from the point of view of the student, to enlarge upon the value of the milking machine, in view of its wide use to-day. Having said this, who will disagree that the desirable measures of control in practically every disease are essentially those of hygiene?

This book still remains the one and only useful reference book of its type for the student of veterinary science.

Canicola Fever : A Human Case in Northern Ireland*

A febrile condition in a man, accompanied by albuminuria, was diagnosed by serological methods as *Leptospira canicola* infection. The suspected source of infection was the man's dog which had recently died after a brief illness. Twelve human contact sera were negative.

J. E. S.

* **Canicola Fever : A Human Case in Northern Ireland.** Kennedy, C. C., Crozier, T. H., & Houston, A. C. (1953). *Brit. med. J.* No. 4803. 197–198.

QUESTIONS IN PARLIAMENT

Irish Republic (Horse Exports to Great Britain)

Lieut.-Colonel Bromley-Davenport (March 23rd) asked the Under-Secretary of State for Commonwealth Relations what communications have passed between the Government of Eire and Her Majesty's Government within the past six months in regard to the question of eliminating unnecessary hardship and cruelty involved in the export of horses from Eire to Great Britain for food purposes.

Mr. J. Foster: I understand that my right hon. Friend the Minister of Agriculture has been in touch with the authorities of the Irish Republic during the period in question about those aspects of the export of horses from the Irish Republic to this country which are within their sphere of responsibility.

. . . . .

Horse Population

Mr. Peter Freeman (March 26th) asked the Minister of Agriculture whether he will state the horse population in 1900, 1910, 1920, 1930, 1940, 1950, and at the latest known date.

Mr. Nugent: The only returns collected concern horses kept on agricultural holdings at the date of the June census. The figures are as follows:—

England and Wales

	1900	1910	1920	1930	1940	1950	1952
	'000	'000	'000	'000	'000	'000	'000
Horses used for agricultural purposes : Mares (including those kept for breeding)	925·0	980·6	788·9	682·8	541·4	170·2	125·0
Geldings						118·8	85·1
Unbroken horses one year old and over : Light	265·1	248·7 (*a*)	228·6	84·8	107·4	16·6	12·9
Heavy						13·2	6·3
Horses under one year old :— Light	115·4	112·6	97·3	37·9		13·4	6·3	5·2
Heavy						30·7	4·0	2·6
Stallions for service :— Light	(*b*)	(*c*)	6·9	3·3	3·3	1·0	0·8
Heavy	(*b*)	(*c*)				0·6	0·4
All other horses	(*b*)	(*b*)	244·0	152·5	123·5	86·7	77·6
Total	1,305·6	1,341·8	1,365·7	961·4	819·6	417·5	316·1

(*a*) Includes stallions. (*b*) Not separately collected.
(*c*) Included under unbroken horses.

. . . . .

Dogs (Livestock Damage)

Mr. Bossom (March 26th) asked the Attorney-General if he will give early effect to the recommendations of the Lord Chancellor's Committee on civil liability for damage done by dogs to sheep and cattle, as existing regulations have not proved effectual in stopping this cruelty to animals and loss of valuable food, particularly in Kent.

The Attorney-General: The recommendations of the Committee are still under consideration.

. . . . .

Feeding-stuffs (De-control)

Mr. Bossom (March 26th) asked the Minister of Agriculture if he will arrange that the change-over from control to de-control of feeding-stuffs takes place at the beginning of the harvest period, that is approximately August 1st, to prevent interference with the marketing of home-grown cereals.

Sir T. Dugdale: Yes; animal feeding-stuffs will be freed from control on August 1st next.

NOTES AND NEWS

Diary of Events

April 8th.—Meeting of the Editorial Committee, B.V.A., 2 p.m., to be followed by Executive.
April 8th.—Meeting of the Lancashire Division, B.V.A., at Manchester (The Midland Hotel), 2.30 p.m.
April 8th.—Meeting of the Southern Counties Division, B.V.A., at Bournemouth (Grand Hotel), 6.30 p.m.
April 9th.—Meeting of the Central Division, B.V.A., at the Royal Veterinary College, London, N.W.1, 10.30 a.m.
April 9th.—Meeting of the Section of Comparative Medicine, Royal Society of Medicine, at 1, Wimpole Street, W.1, 6 p.m.
April 11th.—Meeting of the Biochemical Society, in Brussels (See Notice).
April 11th.—Annual Dinner of the B.R.X. Club, at the Royal Veterinary College, London, N.W.1.
April 13th.—British Agricultural History Society: First Conference at Reading (University).
April 16th.—Meeting of the Herts and Beds Division, B.V.A., at 70, Holywell Hill, St. Albans, 7.30 p.m.
April 17th.—General and Annual General Meetings of the Sussex Division, B.V.A., at Brighton (The Old Ship Hotel), 2.30 p.m. and 8 p.m. respectively.
April 25th.—30th Annual General Meeting of the Association of State Veterinary Officers, in the Auditorium of the Wellcome Foundation, 183-193, Euston Road, N.W.1, 2 p.m.

Aug. 9th—15th.—XVth International Veterinary Congress, Stockholm, Sweden.

Sept. 6th and 12th.—Seventy-first Annual General Meeting and Congress of the British Veterinary Association, at Aberdeen.

B.V.A. Committee and Council Meetings in Edinburgh

At the Royal (Dick) School of Veterinary Studies.

Monday, April 20th.—11 a.m. Organising Committee.
2 p.m. Parliamentary and Public Relations Committee.
3.30 p.m. Home Appointments Committee.
Tuesday, April 21st.—10 a.m. Veterinary State Medicine Committee.
12 noon Finance Sub-committee.
2.15 p.m. General Purposes and Finance Committee.
Wednesday, April 22nd.—11 a.m. Council meeting.

R.C.V.S. Examinations

Wednesday, May 6th.—Animal Management Examination commences at London.
Thursday, May 7th.—Entries for D.V.S.M. Examination due.
Friday, May 8th.—Pharmacology, etc., Examination (Revised Syllabus)—Written Examination.
Monday, May 11th.—Pharmacology, etc. (Revised Syllabus), Orals and Practicals (London and Dublin).
Thursday, June 4th.—D.V.S.M. Written Examination commences at Edinburgh (2 p.m.).
Monday, June 8th.—D.V.S.M. Orals and Practicals.
Thursday, June 25th.—M.R.C.V.S. Written Examinations.
Friday, June 26th.—Ditto.

* * * * *

Report on Artificial Insemination

The Report on Artificial Insemination of Cattle, compiled by the Technical Development Committee, is circulated to all members with this issue. It provides a comprehensive review of the development of artificial insemination in Great Britain and must be of interest to all veterinary surgeons if only because no less than one-third of the national dairy herds of the country were bred from by artificial insemination in 1952.

The booklet includes—amongst sections on technique, bull management, buildings and livestock improvement

through artificial insemination—the addresses and telephone numbers of all established A.I. centres and sub-centres (with the name of the veterinary surgeon responsible), legislation controlling artificial insemination, and various maps and plans.

* * * * *

Lay Assistants for the Ministry's Veterinary Staff

Conditions of Appointment

We are informed by the Ministry of Agriculture and Fisheries that arrangements have been made for the recruitment and employment of lay assistants to its veterinary staff, particulars of the scheme being as follows:—

DUTIES

1. Two grades of lay assistants will be employed—Technical Assistant (T.A.) and Senior Technical Assistant (S.T.A.).

2. Lay assistants will be under the control of D.V.O.s who will be generally responsible for their supervision and training. The duties of these officers will be to assist the veterinary field staff in their professional work. They will not be employed on clerical duties appropriate to the clerical staff of the Divisional Office or any work that is "veterinary surgery." The junior grade will carry out the more straightforward duties such as laboratory work, collecting samples, testing poultry. The senior grade will carry out a variety of duties calling for more maturity and experience.

3. The following is a more detailed statement of the proposed duties of the two grades:—

Junior Grade

(i) Preparation and preliminary examination of milk samples in Divisional Office Laboratories.

(ii) Assisting with post-mortems on poultry, sheep, etc., in Divisional Office Laboratories and preparation of material requiring to be examined.

(iii) Collection of group and bulk samples of milk for biological examination.

(iv) Blood testing of poultry.

(v) Preliminary inspection of proposed attested premises in straightforward cases including advice as to isolation premises, etc., but excluding clinical inspection of cattle and other stock which could be done at time of first official test.

(vi) Making straightforward enquiries about attestation necessitating visits to premises but not requiring veterinary knowledge, *e.g.*, inspection of added land, checking of records, lay out and report on attested shows, issue of permits and general supervision of attested markets.

Senior Grade

(i) Supervision and training of members of the junior grade.

(ii) More difficult enquiries, etc., of the kind referred to in (v) and (vi) above.

(iii) Preparation of animals prior to official tests, checking and recording of identification marks.

(iv) Inspection of and report on markets, loading banks, etc.

(v) Tracing of movement of persons, vehicles, etc. Supervision of cleansing and disinfection of infected premises, control of labour, stores and equipment. Issue of certain classes of permits.

(vi) Inspection and report on licensed swill boiling plants, glue factories, etc.

(vii) Inspection and certain non-veterinary duties in connection with importation of dogs and quarantine kennels.

QUALIFICATIONS

4. Education to School Certificate standard is considered essential for the full range of duties that it is hoped to assign to T.A.s. The subjects taken should include a science subject. Probable suitability, at a later stage, for making the enquiries and doing the supervisory duties required of the S.T.A. grade would also have to be taken into consideration.

COMPLEMENTS AND RECRUITMENT

5. The initial complement proposed is:—
T.A.s 100; S.T.A.s 50.

These numbers will include the present lay poultry testers who will, if they satisfy certain conditions, be given an opportunity of entering the new grades. Those who do not qualify will be retained for the present as poultry testers.

6. Recruitment to both grades will take place in the near future.

We are assured that these lay assistants will not undertake any tuberculin testing and will not be employed on the clinical examination of any animals. As indicated in Paragraph 2 above, these lay assistants will be under the supervision of the Ministry's Divisional Veterinary Officers and will be employed only on duties for which veterinary qualifications are not required.

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PERSONAL

Illness of Professor Wooldridge.—Our readers will be relieved to hear that Professor Wooldridge's condition shows a slight improvement since, in our last issue, we reported his serious attack of pleurisy and congestion of the lungs. Anxiety continues, however, in view of the importance of maintaining his strength. Mrs. George Wooldridge asks us on her behalf to thank the many friends who, as requested, have made their telephone enquiries of Mrs. Reginald Wooldridge, Grimsdyke 1229.

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Award of R.C.V.S. Fellowship to Mrs. M. L. Clarke.—In the report of the quarterly meeting of Council, R.C.V.S., published in our first supplement of this year, announcement was made of the award of the Fellowship diploma to Mrs. Myra Louisa Clarke (formerly Miss Bingham), of Hazelmere, Mortimer Common, Berks. The subject of Mrs. Clarke's thesis was "Changes in the internal anatomy of *Ixodes ricinus L.* during Development of the Nymph to the Adult Stages," and her success is the more noteworthy as representing only the second such Fellowship to be awarded to a woman graduate, the first being obtained by Miss J. O. Joshua in April, 1950.

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Births.—BEAUMONT.—On March 22nd, 1953, at Southampton, to Beryl (*née* Oxenham) wife of Wilfred Beaumont, M.R.C.V.S., a son.

GRIFFITHS.—On March 18th, 1953, at Sandford Nursing Home, Llandudno, to Norine, wife of Laurence Griffiths, M.R.C.V.S., a daughter, Amanda.

. . . . .

Marriage.—MOWAT—MACLEOD.—On March 20th, 1953, at St. Margaret's Church, Knightswood, Glasgow, George Noël, M.R.C.V.S., only son of Mr. and Mrs. G. S. Mowat, 151, Pollok Street, Glasgow, to Christian Joan, only daughter of Mr. and Mrs. Lewis J. MacLeod, 385, Knightswood Road, Glasgow.

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R.C.V.S. OBITUARY

The Late Dr. W. Horner Andrews

It was with great regret that, in our last issue, we had to record the death of Dr. William Horner Andrews which occurred on March 19th, 1953, at his home in South Africa where he had gone to live after his retirement in 1947.

Born at Southsea in Hampshire on June 22nd, 1887, he was the fourth son of Major H. C. Andrews. After attendance at the Grammar School, Kingston, Jamaica (1898-9) and the Mathematical School, Rochester (1900-1904), he entered the Royal Veterinary College, Camden Town, in October, 1904. He was a good student and on graduation (for he took the newly-instituted B.Sc. degree as well as the diploma of the R.C.V.S.) he was awarded the Jubilee Memorial Bursary which he held in Paris where he took the Pasteur Institute course in Microbiology. On his return to England in 1909, he spent a few months in Sir John M'Fadyean's laboratory before joining the staff of Sir Arnold Theiler in South Africa as Assistant Bacteriologist.

In September, 1914, he joined the S.A. Veterinary Corps and was commissioned as Captain, O.C., No. 1 Section. He saw service in German South-West Africa chiefly on mobile duty and was "mentioned in despatches." He was recalled to the laboratory in December, 1915, where by 1918 he was promoted Senior Research Officer and sent to take charge of a branch laboratory in Natal. In 1920, while retaining his post as Senior Research Officer under Sir A. Theiler, he was appointed to the staff of the new Veterinary Faculty of the University of South Africa.

as Professor of Physiology. The degree of D.Sc. (London) was awarded to him in 1921 for work on a form of "staggers" caused by a poisonous plant and occurring in cattle in Natal.

He left the South African service in May, 1924; in August he joined the staff of Sir J. M'Fadyean as Senior Assistant in the Research Institute attached to the Royal Veterinary College in London and in 1927 was appointed Director of the Ministry of Agriculture's Veterinary Laboratory at Weybridge. This new departure coincided with a period of great development in agriculture and he was intimately concerned in the planning of the three splendid new blocks of laboratories as also in the extensions to the two wings of the main building, and the building of the Director's house. In 1929 he was appointed Consultant Director of the Bureau of Animal Health which then began its invaluable activities under the executive direction of W. A. Pool. In 1941 he left the Laboratory in order to take up a post on the Field Staff of the Ministry of Agriculture from which he retired in 1947.

He was of an easy but dignified bearing and of an outstandingly friendly and sympathetic nature, greatly appreciated by people in an inferior position as, for instance, by the many students who were fortunate enough to see his encouraging face across the examination table. His abilities were in the field of scholarship and his inclinations academic rather than political, so that he tended to keep aloof from the hurly burly of the operational field. His interests were wide and the discussion with him of many things was a delightful as well as a profitable interlude. His personal philosophy had reached the stage of advanced development in which he was able to look at a hot world with a cool head and to take all eventualities with equanimity.

Although he cannot be grouped along with those whose urgent concern has been the drive of progress there is no doubt that he has left behind a very large number of friends, and among them many young people who have reason to remember his sympathetic understanding of their difficulties, and who have benefited from his advice.

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AREA ERADICATION PLAN FOR TUBERCULOSIS

The First Mainland Attested Areas

The Ministry of Agriculture and Fisheries announces the declaration by the Minister of Agriculture and Fisheries, which took effect on April 1st, of two Tuberculosis Attested Areas, one in South-West Wales and the other in South-West Scotland. These are the first areas on the mainland to be declared Attested Areas.

The Welsh area comprises the counties of Cardigan and Carmarthen (except the Bettws Mountain District) and part of the county of Pembroke; and the Scottish area the counties of Ayr, Bute, Dumfries, Kirkcudbright, Renfrew and Wigtown, and part of the county of Argyll. The Scottish area includes the islands of Arran and Great and Little Cumbrae in the county of Bute, which were declared an Attested Area on February 1st, 1951. Otherwise the two areas are the same as were declared Eradication Areas on October 1st, 1952. In the meantime, compulsory tests have been carried out and reactors found have been slaughtered.

The two areas together contain about 700,000 cattle, of which all but 6,000 were in herds attested or supervised under the voluntary Attested Herds Scheme when they were declared Eradication Areas last October. At the first round of compulsory tests of these 6,000 cattle the incidence of reactors was 26 per cent. At the second round, completed early in March, only 2 per cent. reacted. The incidence of reactors was lower in the Scottish area at both rounds—14 per cent. and 1 per cent. respectively, compared with 29 per cent. and 2½ per cent. respectively in the Welsh area. For practical purposes tuberculosis is now non-existent in the two areas.

The two areas are already, and will continue to be, subject to the provisions of the Tuberculosis (Area Eradication) Order, 1950. That Order provides that no cattle shall be moved into an Eradication Area or Attested Area except on certain transit journeys or under the authority of a licence issued by a veterinary inspector or other officer of the Ministry or of a permit granted under the Attested Herds Scheme; that a notice may be served on the occupier of any premises in such an Area prohibiting the movement of cattle on to or off the premises except under licence; and contains other provisions designed to prevent the introduction or spreading of tuberculosis.

While the provisions of the 1950 Order will continue to apply, a licence, or permit under the Attested Herds Scheme, will not be needed for movements of cattle between two premises in the same Attested Area unless either premises is for the time being subject to a notice under the 1950 Order prohibiting the movement of cattle on to or off the premises except under licence.

As at present, any reactor found in either Attested Area will be slaughtered with payment of compensation. Whenever a reactor is found, notices will be served on the occupier of the premises (*a*) requiring him to detain and isolate the animal pending its slaughter, and (*b*) prohibiting the movement of cattle on to or off the premises except under licence. When the reactor has been removed for slaughter, the occupier will be required to cleanse and disinfect all parts of the buildings occupied or used by the animal. Not earlier than 60 days after this has been done, a further tuberculin test of the herd will be carried out. If the herd passes the test, the notice prohibiting the movement of cattle on to or off the premises will be withdrawn. During the time that that notice is in force, the occupier will be under a duty to take such steps as may be reasonably practicable to prevent the possible infection of his neighbours' cattle by contact with his cattle.

Copies of the Orders—The Tuberculosis (South-West Wales Attested Area) Order, 1953, and The Tuberculosis (South-West Scotland Attested Area) Order, 1953—can be obtained from H.M. Stationery Office.

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EAST MIDLANDS DIVISION, B.V.A.

Annual Dinner and Dance

The second annual dinner and dance of the East Midlands Division was held at the George Hotel, Nottingham, on Thursday, March 19th, 1953, when some 120 members, their wives and guests were received by the President of the B.V.A., Mr. Alastair M. Graham, and Mrs. Graham, and the President of the East Midlands Division, Mr. Walter S. Marshall, and Mrs. Marshall. Our guests included members of the agricultural and medical professions as well as representatives from surrounding Divisions.

Mr. Graham, in an after-dinner speech, proposed the toast "The East Midlands Division" and paid it many compliments in a most charming manner. Mr. Marshall responded, pointing out that despite its relatively small size the Division boasted amongst its members many of very high standing in all branches of the profession.

Mr. David Campbell, in a very witty speech, toasted "Our Guests and the Ladies" and Mrs. Ann Hughes (wife of our Senior Vice-President and incidentally the only Sassenach amongst the speakers) replied—gently chiding the gentlemen for their after dinner verbosity.

Dancing continued until 1 a.m. with Mr. John McKellar working valiantly as M.C. to ensure its great success.

Several good accounts of this social function have already reached this reporter and seemingly our visitors were left with two outstanding impressions of the evening: firstly, the complete friendliness of the atmosphere and secondly that this profession is second to none in its ability to choose, as wives, the most charming of ladies.

A raffle during the dancing enabled us to send a sum of £12 5s. to the V.V.B.F.

The thanks of the Division are due to the energetic work done by the Dance Committee and their wives—all of whom put in a great deal of work to ensure that this second annual dinner and dance was a resounding success.

W. H. C.

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ROYAL SANITARY INSTITUTE CONGRESS

The Royal Sanitary Institute have now completed the programme for the international Health Congress, which is to take place this year at Hastings from April 28th to May 1st. Representatives of nearly 40 countries will be among the 2,500 delegates and others present. The World Health Organisation, the Food and Agricultural Organisation of the United Nations, 20 British Government departments, and about 1,000 local authorities and other public bodies will also be represented.

This year's Congress President is the Right Hon. Lord Percy, of Newcastle, P.C., a former Rector of the University of Durham, Parliamentary Secretary to the Ministry of Health and President of the Board of Education.

The President of Section D (Veterinary Hygiene) which will meet in Hastings Pier Pavilion on Tuesday, April 28th, is Dr. James McCunn, M.R.C.S., L.R.C.P., M.R.C.V.S., Professor of Veterinary Anatomy, Royal Veterinary College. The Vice-Presidents are Major A. V. Franklin, T.D., M.R.C.V.S., Divisional Veterinary Officer, Animal Health Division, Ministry of Agriculture and Fisheries; Mr. John C. Greatorex, M.R.C.V.S., Lecturer in Medicine, Royal Veterinary College; Mr. E. P. Thorne, M.R.C.V.S., Superintending Veterinary Officer, Animal Health Division, Ministry of Agriculture and Fisheries, and Captain Arthur Whicher, M.R.C.V.S. Mr. W. Brennan De Vine, M.C., F.R.C.V.S., D.V.S.M., is Recording Secretary, and Local Secretaries

are Mr. T. M. O'Connor, M.R.C.V.S., and Mr. J. S. Pybus, M.R.C.V.S.

Following the address by the President of the Section, the following papers will be presented and discussed: "Tuberculin Testing in Relation to the National Dairy Herd," by Mr. H. Birkett Allan, M.R.C.V.S., D.V.S.M., Superintending Veterinary Officer, Ministry of Agriculture and Fisheries; "The Abattoir Laboratory," by Mr. E. F. Lewis, M.R.C.V.S., Lecturer in Medicine, Royal Veterinary College.

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ADDRESSES OF DISEASE-INFECTED PREMISES

The list given below indicates, first, the county in which are situated the premises on which disease has been confirmed, followed by the postal address and date of outbreak.

ANTHRAX:

Berks.—Phillips Farm, Eaton Hastings, Faringdon (Mar. 26).
Buteshire.—Little Kilchattan Farm, Kingarth, Isle of Bute (Mar. 21).
Ches.—Bradley Hall, Grappenhall, Warrington (Mar. 24); Dodleston Farm, Dodleston, Chester (Mar. 25).
Derbys.—Broadclose Farm, Thorpe, Ashbourne (Mar. 20).
Dumfriesshire.—Bellfield, Holywood, Dumfries (Mar. 20th); The Strand, Kirkconnel, Sanquhar (Mar. 23).
Kent.—Rushbourne Farm, Hoath, Canterbury (Mar. 23).
Midlothian.—Smeaton Farm, Smeaton, Dalkeith (Mar. 23).
Notts.—Hol Hill Farm, Plumtree, Nottingham (Mar. 23).
Roxburghshire.—Messrs. Leader Stock Co., Chapel-on-Leader, Earlston (Mar. 21).
Salop.—Moelydd Farm, Trefownen, Oswestry (Mar. 23).
Somerset.—Court Farm, Ilton, Ilminster (Mar. 25).
Yorks.—Dunsforth Lodge, Lower Dunsforth, Boroughbridge (Mar. 26).

FOOT-AND-MOUTH DISEASE:

Flints.—Leith House, Gwindy Street, Rhuddlan (Mar. 24).

FOWL PEST:

Cambs.—Ambrose Yard, Bridge Street, Chatteris (Mar. 24).
Essex.—Mount Hill Farm, Halstead (Mar. 26).
Lancs.—Sherwood, Marshes Lane, Mere Brow, Tarleton, Preston (Mar. 20); 11, Jersey Street, Blackburn (Mar. 21).
Norfolk.—4, Cornal Houses, Bradenham Road, Shipdham, Thetford (Mar. 24).
Oxon.—Moorland, Witney Road, Eynsham, Oxford (Mar. 24).
Suffolk.—Vicarage Farm, Great Barton, Bury St. Edmunds (Mar. 24).
Sussex.—1, St. George's Place, Steyning (Mar. 21).

SWINE FEVER:

Beds.—5, Hatley Road, Potton, Sandy (Mar. 25).
Berks.—Manor Farm Allotments, Reading (Mar. 20).
Berwicks.—Slighhouses, Chirnside, Duns (Mar. 25).
Cambs.—The Mill, Linton Road, Balsham, Cambridge (Mar. 20).
Ches.—Porch House Farm, Runcorn Road, Walton, Warrington (Mar. 25).
Cornwall.—"Fernleigh," Penstraze, Chacewater, Truro; Bufton, Constantine, Falmouth: Anthony Estate Co., Torpoint (Mar. 23).
Derbys.—Elmton Lodge Farm, C well, Worksop (Mar. 23).
Essex.—North End Place, Northend, Felstead, Dunmow (Mar. 21); 35, Ellanor Road and Birchwood, Little Baddow, Chelmsford; Coopersale Farm, Epping (Mar. 25)
Glos.—White Hart Hotel, Fairford (Mar. 20); Manor Farm, Aston, Subedge, Campden (Mar. 21); Box Tree Farm, Teddington, Tewkesbury; Tenacres, Culver Hill, Amberley, Stroud (Mar. 23); Rock Cottage, Ruarden Hill, Drybrook (Mar. 24).
Hants.—Manor Farm, Rockbourne, Fordingbridge (Mar. 21).
Herts.—Hatfield Broad Oak, Bishop's Stortford (Mar. 23); Friars Farm, High Wych, Sawbridgeworth (Mar. 24).
Herefords.—Mount Pleasant, Tenbury Road, near Bromyard (Mar. 25).
Lincs.—Elwin's Yard, Swaby, Alford (Mar. 24); Mile House, Heckington, Sleaford; Causeway House, Wyberton, Boston (Mar. 26).
Middlesex.—Piggeries at Alexandra Road, Ponders End, Enfield (Mar. 23); Pickett's Lock Lane, Edmonton, N.9. (Mar. 24).
Montgomeryshire.—Cilthriw, Llantsantffraid (Mar. 23); Ty Issa, Llansantffraid (Mar. 25).
Norfolk.—Beeches Farm, Morningthorpe Norwich (Mar. 25).
Notts.—Bridge House Farm, Cuckney, Mansfield (Mar. 20).
Salop.—Cross Farm, Trefonen, Oswestry; Cleveland Bank, Snow Hill, Stoke-on-Trent (Mar. 20); Owlbury Farm, Church Stoke (Mar. 21); Cross Green Farm, Berwick, Shrewsbury (Mar. 25).
Somerset.—Anchor Inn, Combwich, Bridgwater (Mar. 23).
Staffs.—Norton Lane, Burntwood, Lichfield (Mar. 20); 99, Ebenezer Street, Hill Top, West Bromwich (Mar. 21); The Poplars, Queen Street, Chasetown, Walsall; 19, Clarence Street, Upper Gornal (Mar. 23); Overdale Poultry Farm, Colwich, Stafford (Mar. 24); 110, Rugeley Road, Boney Hay, Walsall (Mar. 26).
Suffolk.—Hill Rise, Barnis.on Road, Hundon, Sudbury (Mar. 20); "Shepherd and Dog," Nacton; Ipswich; 11, Mill Road, Keddington, Haverhill (Mar. 21); Station Lane Gardens, Trinity St. Mary; Birch House, Great Barton, Bury St. Edmunds (Mar. 23); Hall Street, and Little St. Mary's, Long Melford, Sudbury (Mar. 24); Hill Top Farm, Rattlesden, Bury St. Edmunds (Mar. 26).
Surrey.—Horton Hospital Farm, Epsom (Mar. 25).
Warwicks.—Alma Croft, High Street, Warstock, Shirley, Birmingham (Mar. 23); No. 4, Council Houses, Fen End, Kenilworth; Midcot, Upper Brailes; Marlpit Farm, Four Oaks, Sutton Coldfield, Terrace Cottages, Avon Dassett, Leamington Spa (Mar. 24); Hollybank, Station Road, Coleshill, Birmingham (Mar. 25); Court Farm, Temple Grafton, Alcester (Mar. 26).
Wilts.—Wexland Farm, Netheravon, Salisbury; Mantles Lane, Heytesbury, Warminster (Mar. 23); Scotsmith Farm, Dauntsey, Chippenham, The New Farm, Westbury Road, Warminster (Mar. 24).
Worcs.—Wordsley Hospital, Stourbridge (Mar. 21); Southcrest Lodge, Mount Pleasant, Redditch (Mar. 23); Chesterfield House, Feckenham, Redditch (Mar. 25); Canada Lodge, Lower Cowsden, Upton Snodsbury; Timberdine Farm, Kempsey (Mar. 26).
Yorks.—Sunny View, North Rigton, Leeds (Mar. 20); Owler's Farm, Wide Lane, Morley, Leeds (Mar. 21); West Newlands Farm, Riccall, York; High Cross Farm, Queensbury, Bradford; Middle Haig House, Lindley, Huddersfield (Mar. 23); Grove Cottage and Beechwood, River Head, Duffield; Coldstone House Farm, Sinderby, Thirsk; North Tanfield, Ripon (Mar. 24); 72, High Street, Dodworth, Barnsley; Penny Lane, Totley, Sheffield (Mar. 25).

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CLINICAL MEETINGS AT ABERDEEN

During the six winter months a small group of veterinary surgeons in Aberdeen has been meeting monthly to discuss subjects of mutual interest. The idea of having these clinical meetings was conceived by C. Ironside, Inverurie, and enthusiastically taken up by the other members. The group consists of four practitioners, a member of the Animal Health Division and a member of the V.I.O. service. Each meeting is held at a member's home and the host, who is entitled to invite two guests, provides the main subject for discussion. The meetings were a huge success both professionally and socially. The main subjects discussed were: 1. The use of X-rays in country practice; 2. Scouring in pigs; 3. Acetonaemia; 4. Calf scours; 5. Foot-and-mouth Disease; 6. Some aspects of bovine infertility. Innumerable other items of interest were freely discussed and the venture proved so attractive that it has been unanimously agreed that they should be continued on similar lines next winter.

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HARRY STEELE-BODGER MEMORIAL FUND

The Appeal Committee are indeed grateful to all those, both within and without the profession, who have contributed to this fund in such generous measure.

With the further contributions expected the sum achieved will provide a worthy and fitting memorial to one who did so much for the veterinary profession and agriculture as a whole.

The subscription lists will close on April 30th, but in the case of organisations and societies not meeting before that date the Hon. Treasurer will be pleased to accept donations later.

Lists of future contributions received will be published in *The Veterinary Record* on April 11th and 25th, and the final list on May 9th.

All donations should be sent to
S. L. Hignett,
Steele-Bodger Memorial Fund,
British Veterinary Association,
36, Gordon Square,
London, W.C.1.

Cheques, etc., should be made payable to the "Steele-Bodger Memorial Fund."

COLSTON RESEARCH SOCIETY

Symposium on Insecticides and Colonial Agricultural Development

The Colston Research Society, which for many years has made grants in aid of research in the University of Bristol, has, since 1948, arranged Annual Symposia on selected research topics of current importance. For 1953, the Jubilee Year of the Long Ashton Research Station, the subject was "Insecticides and Colonial Agricultural Development."

A Symposium was held at Bristol from March 23rd to the 27th and was attended by some 80 or more members. These included representatives of universities, Government departments, Colonial Agricultural departments and industrial firms interested in the insecticide field. The Symposium, which was held in the congenial surroundings of Manor Hall, provided a most valuable opportunity for all the members to get together and discuss their mutual problems. On March 24th and 25th the programme was devoted to papers and discussions relating to crop protection, the control of locusts and general problems relating to the use of insecticides in the plant protection field. The Colston Research Society's annual banquet was held in the University Great Hall on Wednesday evening, March 25th. The guest speaker, Sir Edward Salisbury, C.B.E., F.R.S., gave a most interesting survey of the work of the Colston Research Society and of the value of the Symposium, which brought together workers from many parts of the world.

On Thursday, March 26th, the morning session was devoted to discussion of the application of insecticides for the control of diseases and parasites of livestock. The Chairman for this session was Dr. A. W. Stableforth. The opening paper was to have been given by Sir Thomas Dalling on "A Review of Insect Transmitted Diseases of Livestock in Colonial Territories." Unfortunately, Sir Thomas Dalling was detained in India and his paper was read for him, at very short notice, by Professor Blakemore. This was followed by an interesting paper from Dr. J. Carmichael, C.M.G., on "The Control of Insects of Veterinary Importance with Special Reference to the Tsetse Fly." Dr. Carmichael introduced the wonderful colour film entitled "Nagana" which has been made by the South African authorities as a record of the control of tsetse fly in Zululand by spraying from aircraft. After a short interval this was followed by a paper by Mr. H. E. Harbour of the Cooper Technical Bureau on the subject of "The Control of Ectoparasites of Livestock." Then followed a discussion of all three papers which was ably opened by Dr. Matysse of Cornell University, who was on his way back to America after spending a year in Northern Rhodesia studying tick control problems.

The afternoon session on Thursday, March 26th, was devoted to two papers by Dr. H. G. H. Cearns on "Spraying Technique and Machinery" and Dr. E. Holmes on "The Insecticide Manufacturer's Research and Supply Problems." Both of these papers were greatly enjoyed by the Symposium and a lively discussion ensued. The Symposium was concluded by a visit, on Friday, March 27th, to the University Agricultural and Horticultural Research Station, Long Ashton.

The arrangements for the Symposium, under the direction of Professor T. Wallace and his able secretary, Dr. J. T. Martin, were really wonderful and everything ran smoothly. It was generally agreed that the Symposium had been a great success.

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DECREASE OF FOOT-AND-MOUTH DISEASE ON THE CONTINENT

Commenting on figures of the number of outbreaks of foot-and-mouth disease in continental countries given in its March bulletin, the International Office of Epizootics says: "From the information given it can be deduced that in most of the countries under consideration foot-and-mouth disease is rapidly decreasing. That is, however, the usual and natural development of foot-and-mouth epizootics.

"In some countries at the present time there is a tendency to consider this decline as a direct and predominating effect resulting from active immunisation. However, in that respect we would point out that in France, for example, relatively few vaccinations have been carried out since August, 1952 which had been the peak period of the epizootic (with 220,000 infected farms on August 15th). Nevertheless, since then the epizootic curve has constantly been decreasing very rapidly, as rapidly as it had gone up.

"However that may be, if in such countries as Great Britain, Norway, Sweden, Switzerland which have used and are still using the stamping out method and the strict application of sanitary regulations, the *internal* occurrence and diffusion of the epizootic are not to be feared (though as a matter of fact the infection can be introduced from outside), this is not the case for the countries in which this system has not been enforced, as in these countries there remain animals which are virus carriers or vectors; this—as has generally been the case in the past—may bring fluctuations of the disease and develop an enzootic situation which sooner or later may result in a new epizootic—for instance on account of the occurrence of a new virus variant against which vaccinated animals are not immunised.

"This is why in the first place, we recommend a constant vigilance. This is why, also, we persist in believing that with a planned and simultaneous action, the European countries (which are all neighbouring countries to each other) in which a considerable decline of foot-and-mouth disease is recorded at present, should stamp out the last few outbreaks by the application of the system involving slaughter and strict observance of sanitary policy laws, this system being completed, if necessary, by vaccination preferably with a polyvalent vaccine.

"May such countries as Great Britain, Norway, Sweden, Switzerland as well as Canada which thanks to the application of that system have been able to cope with the foot-and-mouth disease epizootic and its disastrous consequences in their territories at a relatively low cost, serve as examples; then, as we believe strongly, the battle against foot-and-mouth disease will soon be won."

CORRESPONDENCE

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

BOVINE LIPOMATOSIS

Sir,—From Professor H. Burrow, who examined the Guernsey bull, the subject of Case Seven (*Vet. Rec.* **64**, 449-454), I learn that this animal was functionally fertile until the time of its death. The last service by this bull was carried out within 12 days of it dying and this mating, according to the herdsman present at the time, was quite normal.

It would be relevant to add here that it is unlikely that any two cases of lipomatosis would be identical in symptomatology, as it is extremely improbable that precisely the same areas would be affected in any two animals.

It would seem that in the case of the Red Poll bull reported by Messrs. Shaw and Hayes in your issue of last week, lesions (or associated adhesions) had formed, which involved pain, or limited the movement of the genital organs, at the time of service. The association in both the male and female subjects between the condition of lipomatosis and sterility, is due basically to the fact that lesions of lipomatosis would appear most commonly to involve the pelvic region, and therefore would be in a site where a secondary involvement of the organs of reproduction is likely to occur.—Yours faithfully, F. ANDREW EDGSON, 50-51, Friar Street, Reading. *March 30th*, 1953.

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DISEASES OF ANIMALS ACT, 1950—GREAT BRITAIN

Summary of Returns of Confirmed Outbreaks of Scheduled (Notifiable) Diseases

Period	Anthrax	Foot-and-mouth	Fowl Pest	Sheep Scab	Swine Fever
1st to 15th March, 1953	43	2	14	—	93
Corresponding period in—1952	23	3	10	—	44
1951	21	2	14	—	25
1950	26	3	8	3	—
1st January to 15th March, 1953 ...	250	21	171	—	386
Corresponding period in—1952	97	29	55	1	206
1951	126	17	428	4	176
1950	104	9	36	18	—